D-Link Corporation

Firewall Specification

NetDefend SOHO UTM Firewall

DFL-160 ver. A1

4*10/100/1000 Mbps LAN Port + 1*10/100/1000 Mbps DMZ Port + 1*10/100 Mbps WAN Port

Version 1.10

Date: 2008/10/20

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DFL-160 Specification Revision History

Version	Revised Date	Author	Description
1.00	2008/9/1	Jeff Ko	Initial Draft
1.10	2008/10/20	Jeff	1. Change Firewall, VPN and IPS/AV performance number. 2. Change Current session to be 6,000. 3. Remove Perfect Forward Secrecy (DH Group), Aggressive mode, x.509, manual key, DPD, VPN tunnel keep alive and IPSec IKE config mode for VPN feature. 4. Add XAUTH authentication support. 5. Remove Multiple PPPoE Tunnel, DHCP relay, DHCP over IPSec, Static DHCP Addresses Assignment, IP NAT Pool, IP Alias, Static Routes. 6. Remove cjb.net, dyndns.cx, TZO.com, dhs.org, Peanut Hull (oray.net) from DDNS support, H.323 NAT Traversal, SIP ALG and H.323 ALG. 7. Remove Install Wizard. 8. Remove Trust host for remote management. 9. Remove External database support and User Group-Base authentication. 10. Increase internal log capacity to be 500. 11. Modify Support Log Receiver number to be 2 receivers supported. 12. Remove Event log and alarm, Support SNMP v1, v2c. 13. Add separate internal logging for IDP, AV, WCF. 14. Change Bandwidth Management to be in future release. 15. Add Decompression Explosion Protection and Scan Exclusion Control for Anti-Virus. 16. Remove Scripts Type: Java Applet, Java Scripts, VB Scripts, Cookies, Active X for WCF. 17. Change Anti-Spam to be in future release.

Product Description:

In D-Link firewall product line, DFL-160 is the small UTM firewall with five gigabit ports, which adopts D-Link's own Home-Router GUI design for smoothing user experience of non-IT customers, and targeting at SOHO market.

For product positioning and differentiating, DFL-160 would belong to NetDefend SOHO series, not professional NetDefend series

1. Product General Feature Information

1.1 Hardware Specification

- CPU: Intel IXP435 @ 400MHz
- Flash: 128 MB
- DRAM: 128 MB
- Ethernet Interface: 5 10/100/1000 + 1 10/100 Mbps Ethernet ports
- Console Interface: DB-9 RS-232 connector *1
- Other: USB 2.0 port *1
- VPN accelerator for better VPN performance

1.2 Software Features

1.2.1 Maximum Performance and Capacity

- Firewall Performance: 70 Mbps
- 3DES/AES Performance: 25 Mbps
- IPS/Antivirus Performance: 15 Mbps
- Current Session: 6,000
- New Session/second: 5,000
- Policies: 300
- Support Users: Unrestricted

1.2.2 Firewall Mode of Operation

- Layer 3 mode: Route mode, NAT mode
- Layer 2 mode: Transparent mode
- Network Address Translation (NAT)
- Port Address Translation (PAT)
- Port Forwarding
- Time-Scheduled policies configuration

1.2.3 Virtual Private Network (VPN)

- IPSec Protocol: ESP
- IPSec Mode: Tunnel mode, Transport mode
- Encryption Method: DES/3DES/AES/Twofish/Blowfish/CAST-128/NULL
- Authentication Algorithm: MD5, SHA-1
- Support PPTP/L2TP/IPSec VPN Server
- PPTP Server support MPPE encryption
- Site to Site VPN, Remote Access VPN for IPSec
- Dedicated VPN Tunnels: up to 30
- IKE mode: Main mode
- Key Management:
  - Pre-share key
- IPSec NAT Traversal (NAT-T)
- Prevent Replay Attack
- XAUTH authentication support

1.2.4 IP Assignment & Routing

- Static IP address
- PPPoE for xDSL, PPTP Client for xDSL, DHCP Client for WAN interface
- Internal DHCP Server

1.2.5 Networking

- IP Multicast: IGMP v3 routing and forwarding (compatible with v1 and v2)
- DDNS Client: D-Link DDNS, DynDNS.org.
- Support ALG (Application Layer Gateway)
  - HTTP, FTP, POP3, SMTP, TFTP

1.2.6 System Management

- Console Interface
- Web UI Interface
- SNTP and UDP Time Synchronization
- Support D-Link NTP Server

1.2.7 User and Device Administration

- Multi-level user permission control (Administrator and Read-Only)
- Software upgrade, Configuration Backup/Restore from:
  - Web UI

1.2.8 User Authentication

- Build-in user database: 250 items

1.2.9 Logging and Monitoring

- Internal log capacity: 500 records
- Log viewer
- Email notification for IDP log
- Support external log server: syslog server
- Support 2 log receivers
- VPN tunnel monitor
- Separate internal logging for IDP, AV, WCF

1.2.10 Bandwidth Management *

- Guaranteed Bandwidth
- Maximum Bandwidth
- Priority-Bandwidth utilization

1.2.11 Intrusion Detection and Prevention System (IPS/IDP)

- Support advanced IPS/IDP update service.
- NIDS pattern auto update
- DoS, DDoS attack protection
- Detect Nimda, CodeRed attack
- IP black-listing: It will be triggered by network threshold or IPS/IDP signature database.
- Attack alarm via email notification

1.2.12 Anti-Virus Packet Inspection

- Supported Protocol: HTTP, FTP, SMTP, POP3
- Anti-Virus over VPN
- Protocol/Port Configurable
- Scanning of all MIME types
- Supported Compression File Formats: ZIP, GZIP
- Decompression Explosion Protection
- Scan Exclusion Control

1.2.13 Dynamic Web Content Filtering

- HTTP Type: Web URL filter. (Only for HTTP protocol, it doesn't support HTTPS protocol)
- Over 30 number of Web content category

1.2.14 Email Security *

- Support Protocol: SMTP
- Sender/Recipient Email address Blacklist/Exempt List filtering (for SMTP protocol only)
- MIME header check for file extensions filtering
- Email rate protection (for SMTP protocol only)
- Email size protection (for SMTP protocol only)
- Anti-Spam (for SMTP protocol only)
  - Real-Time DNSBL/Open Relay Database Server
  - Weight-based DNS blacklist
  - Customize spam tag information in email subject
  - Forward blocked emails

Note: Mark * indicates the specific feature will be announced in future release firmware.

2. LED indicators

Location	LED Indicative	Color	Status	Description
Per Device	**Power**	Green	Solid Light	Power On
			Light off	Power Off
LED Per 10/100/1000 Mbps Port	**Link/Act/Speed**	Green/Amber	Solid Green	When there is a secure 10/100Mbps Fast Ethernet connection (or link) at any of the ports.
			Blinking Green	When there is reception or transmission (i.e. Activity—Act) of data occurring at a Fast Ethernet connected port.
			Solid Amber	When there is a secure 1000Mbps Ethernet connection (or link) at any of the ports.
			Blinking Amber	When there is reception or transmission (i.e. Activity—Act) of data occurring at an Ethernet connected port.
			Light off	No link

3. Physical & Environment

3.1 AC input
- 100-240 VAC, 50/60Hz
- External power supply

3.2 Operation Temperature
- 0-50°C

3.3 Storage Temperature
- -40-70°C

3.4 Humidity
- Operation: 10%-90% RH
- Storage: 5% ~ 90% RH

3.5 Power Consumption
- Below 20W

4. Mechanical

Metal Case	
□ 19" Metal Case	□11" Metal Case □ Others
Plastic Case	
□ D-Link Big Size 235x162x36mm	□ D-Link Middle Size 193x118x31mm
□ D-Link Small Size 142x109x31mm	□ D-Link Palm Size 104x61x28mm
□ D-Link Mini D Size 90x82x31mm	□ D-Link Pocket Size 80x52x27mm
■ Others 220(L) X 150(W) X 32.5(H) mm	

5. Emission (EMI), Safety and other certification

- EMI: FCC Class B, CE Class B, C-Tick, VCCI
- Safety: UL/cUL, LVD (EN60950-1)

6. Production Requirement

At least 60℃, 4 hours burn-in process
All manufacturing process must be Lead-Free process

7. Package Content

One DFL-160 Device
Gift Box
Quick Installation Guide
Master CD
RS-232 Console cable
Power Adopter AC/DC
One Cat. 5.e Cable